WHAT IS CLAIMED IS:

1. An optical device comprising a light transmissive plate-shaped light guide for guiding light incident from an end surface, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, and a reflection plate provided on a lower surface of said optical control layer through a transparent electrode provided as a second electrode,

wherein said optical control layer changes in refractive index by an electric field applied by said first electrode and said second electrode, shows a refractive index substantially same as or greater than that of said plate-shaped light guide when no electric field is applied and shows a small refractive index as compared with said plate-shaped light guide when an electric field is applied, and

said reflection plate is made of a light transmissive material, a reflection surface of said reflection plate is angled at a predetermined angle with respect to a surface thereof on said optical control layer side, and a reflection film is formed on said reflection surface.

2. The optical device as claimed in Claim 1, wherein said reflection surface comprises a sawtooth angled surface group having a predetermined inclination angle.

3. An optical device comprising a light transmissive plate-shaped light guide for guiding light incident from an end surface, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, and a reflection plate made of a light transmissive plate provided on a lower surface of said optical control layer through a second electrode comprising said transparent electrode,

wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal changing in scattering degree by an electric field applied by said first electrode and said second electrode, which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

4. An optical device comprising a light transmissive plate-shaped light guide for guiding light incident from an end surface, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, and a second electrode which is an electrode provided on a lower surface of said optical control layer for making mirror reflection of light,

wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal changing in scattering degree by an electric field applied by said first electrode and said second electrode, which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

5. An optical device comprising a light transmissive plate-shaped light guide for guiding light incident from an end surface, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, and a reflection plate made of a light transmissive plate provided on a lower surface of said

optical control layer through a transparent electrode provided as a second electrode,

wherein said optical control layer changes in diffraction ability by an electric field applied by said first electrode and said second electrode.

6. An optical device comprising a light transmissive plate-shaped light guide for guiding light incident from an end surface, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, and a second electrode which is an electrode provided on a lower surface of said optical control layer for making mirror reflection of light,

wherein said optical control layer changes in diffraction ability by an electric field applied by said first electrode and said second electrode.

7. The optical device as claimed in Claim 5, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas, wherein

said liquid crystal has a structure periodically distributed in the form of a diffraction grating.

8. The optical device as claimed in Claim 6, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas, wherein said liquid crystal has a structure periodically distributed in the form of a diffraction grating.

9. The optical device as claimed in Claim 5, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal.

10. The optical device as claimed in Claim 6, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal.

11. The optical device as claimed in Claim 5, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal

in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

12. The optical device as claimed in Claim 6, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

13. An optical device comprising a light transmissive plate-shaped light guide for guiding light incident from an end surface, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, a second electrode provided on a lower surface of said optical control layer, and a substrate provided on a lower surface of said second electrode,

wherein at least one of said first electrode and said second electrode has

a periodic structure for inducing a fine periodic structure for light diffraction in said optical control layer, and

said optical control layer changes in refractive index or absorptivity or scattering degree by an electric field applied by said first electrode and said second electrode.

14. The optical device as claimed in Claim 1, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

15. The optical device as claimed in Claim 2, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality

of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

16. The optical device as claimed in Claim 3, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

17. The optical device as claimed in Claim 4, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

18. The optical device as claimed in Claim 5, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

19. The optical device as claimed in Claim 6, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

20. The optical device as claimed in Claim 10, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second

electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

21. The optical device as claimed in Claim 1, wherein one of said first electrode and second electrode is divided into display pixel units and each of said divided display pixel units has a switching device.

22. The optical device as claimed in Claim 2, wherein one of said first electrode and second electrode is divided into display pixel units and each of said divided display pixel units has a switching device.

23. The optical device as claimed in Claim 3, wherein one of said first electrode and second electrode is divided into display pixel units and each of said divided display pixel units has a switching device.

24. The optical device as claimed in Claim 4, wherein one of said first electrode and second electrode is divided into display pixel units and each of said divided display pixel units has a switching device.

25. The optical device as claimed in Claim 5, wherein one of said first electrode and second electrode is divided into display pixel units and each of said divided display pixel units has a switching device.

26. The optical device as claimed in Claim 6, wherein one of said first electrode and second electrode is divided into display pixel units and each of said divided display pixel units has a switching device.

27. The optical device as claimed in Claim 10, wherein one of said first electrode and second electrode is divided into display pixel units and each of said divided display pixel units has a switching device.

28. An optical device comprising a light transmissive plate-shaped light guide for guiding light incident from an end surface, an optical control layer provided on a lower surface of said plate-shaped light guide, periodic electrodes having periodic structures disposed in alternation and provided on a lower surface of said optical control layer for inducing a fine periodic structure for light diffraction in said optical control layer, and a substrate provided on a

lower surface of said periodic electrodes disposed in alternation,

wherein said optical control layer changes in refractive index or absorptivity or scattering degree by an electric field applied by said periodic electrodes disposed in alternation.

29. The optical device as claimed in Claim 28, wherein said electrode having periodic electrodes disposed in alternation is provided for each of display pixel units, and each of said divided display pixel units has a switching device.

30. An optical device comprising: a light transmissive plate-shaped light guide for guiding light incident from an end surface; an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode; a second electrode having a plurality of divided electrodes, and a plurality of third electrodes one to one corresponding to each of said plurality of divided second electrodes and penetrating through said substrate,

wherein said optical control layer changes in refractive index or absorptivity or scattering degree

by an electric field applied by said first electrode and said second electrode,

each of said plurality of third electrodes has a first end part connecting to said second electrode and a second end part exposed to a surface opposite to said second electrode side surface of said substrate, and

said respective electrodes are capable of being applied with a voltage from said substrate side discretely or dividedly in an optional number of groups.

31. An optical device comprising: a light transmissive plate-shaped light guide for guiding light incident from an end surface; a first stacked body integrated with an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode; and a second stacked body integrated with each of substrate divided into a plurality of units,

wherein said second stacked body corresponds one to one to each of said second electrode divided into a plurality of units and a substrate provided on a lower surface of said electrode, has a plurality of third electrodes penetrating through said substrate, and arranged on a lower surface of said optical control layer,

said optical control layer changes in refractive index or absorptivity or scattering degree by an electric field applied by said first electrode and second electrode,

each of said plurality of third electrodes has a first end part connecting to said second electrode and a second end part exposed to a surface opposite to said second electrode side of said substrate, and said respective electrodes are capable of being applied with a voltage from said substrate side discretely or dividedly in an optional number of groups.

32. A display apparatus comprising an optical device and a illumination means for applying light to said optical device, wherein

said optical device has an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on a lower surface of said plate-shaped light guide and changing in refractive index by an electric field applied through a transparent electrode provided as a first electrode, and a reflection plate provided on a lower surface of said optical control layer through a transparent electrode provided as a second electrode,

wherein said optical control layer has a liquid crystal exhibiting a refractive index substantially same as or greater than that of said plate-shaped light guide when no electric field is applied and a small refractive index as compared with said plate-shaped light guide when an electric field is applied, and

said reflection plate is made of a light transmissive material, a reflection surface of said reflection plate opposite to said optical control layer side is angled at a predetermined angle with respect to a side surface of said optical control layer, and a reflection film is provided on said reflection surface.

33. The display apparatus as claimed in Claim 32, wherein said reflection surface comprises a sawtooth angled surface group having a predetermined inclination angle.

34. A display apparatus comprising an optical device and a illumination means for applying light to said optical device, wherein

said optical device has an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on

a lower surface of said plate-shaped light guide, and a reflection plate made of a light transmissive plate provided on a lower surface of said optical control layer through a transparent electrode provided as a second electrode,

wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal changing in scattering degree by an electric field applied by said first electrode and said second electrode, which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

35. A display apparatus comprising an optical device and a illumination means for applying light to said optical device, wherein

said optical device has an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, and a second electrode provided as an

electrode on a lower surface of said optical control layer for making mirror reflection of light,

wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal changing in scattering degree by an electric field applied by said first electrode and said second electrode, which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

36. A display apparatus comprising an optical device and a illumination means for applying light to said optical device, wherein

said optical device has an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on a lower surface of said plate-shaped light guide, and a reflection plate made of a light transmissive plate provided on a lower surface of said optical control layer through a transparent electrode provided as a second electrode,

wherein said optical control layer changes in diffraction ability by an electric field applied by said first electrode and said second electrode.

37. A display apparatus comprising an optical device and a illumination means for applying light to said optical device,

said optical device has an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, and a second electrode provided as an electrode on a lower surface of said optical control layer for making mirror reflection of light,

wherein said optical control layer changes in diffraction ability by an electric field applied by said first electrode and said second electrode.

38. The display apparatus as claimed in Claim 36, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid

crystal in which respective polymer resin area and liquid crystal area form continuous areas, wherein said liquid crystal has a structure periodically distributed in the form of a diffraction grating.

39. The display apparatus as claimed in Claim 37, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas, wherein said liquid crystal has a structure periodically distributed in the form of a diffraction grating.

40. The display apparatus as claimed in Claim 36, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal.

41. The display apparatus as claimed in Claim 37, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal.

42. The display apparatus as claimed in Claim 36, wherein said optical control layer is made of a reverse

mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

43. The display apparatus as claimed in Claim 37, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

44. A display apparatus comprising an optical device and a illumination means for applying light to said optical device;

said optical device having an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on a lower surface of said plate-shaped light guide

through a transparent electrode provided as a first electrode, a periodic electrode provided as a second electrode having a periodic structure provided on a lower surface of said optical control layer for inducing a fine periodic structure for light diffraction in said optical control layer, and a substrate provided on a lower surface of said second electrode,

wherein at least one of said first electrode and said second electrode has

a periodic structure for inducing a fine periodic structure for light diffraction in said optical control layer, and

said optical control layer changes in refractive index or absorptivity or scattering degree by an applied electric field, and is made of a reverse mode polymer dispersed liquid crystal changing in refractive index or absorptivity or scattering degree by an electric field applied by said first electrode and said second electrode, which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

45. The display apparatus as claimed in Claim 32, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

46. The display apparatus as claimed in Claim 33, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

47. The display apparatus as claimed in Claim 34, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second

electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

48. The display apparatus as claimed in Claim 35, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

49. The display apparatus as claimed in Claim 36, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second

electrodes are disposed to be perpendicular to each other.

50. The display apparatus as claimed in Claim 37, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

51. The display apparatus as claimed in Claim 44, wherein at least one of said first electrode and second electrode comprises an electrode group divided into strips, when both of said first electrode and second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

52. The display apparatus as claimed in Claim 32, wherein at least one of said first electrode and second electrode is divided into display pixel units, and each of said divided display pixel units has a switching device.

53. The display apparatus as claimed in Claim 33, wherein at least one of said first electrode and second electrode is divided into display pixel units, and each of said divided display pixel units has a switching device.

54. The display apparatus as claimed in Claim 34, wherein at least one of said first electrode and second electrode is divided into display pixel units, and each of said divided display pixel units has a switching device.

55. The display apparatus as claimed in Claim 35, wherein at least one of said first electrode and second electrode is divided into display pixel units, and each of said divided display pixel units has a switching device.

56. The display apparatus as claimed in Claim 36, wherein at least one of said first electrode and second

electrode is divided into display pixel units, and each of said divided display pixel units has a switching device.

57. The display apparatus as claimed in Claim 37, wherein at least one of said first electrode and second electrode is divided into display pixel units, and each of said divided display pixel units has a switching device.

58. The display apparatus as claimed in Claim 44, wherein at least one of said first electrode and second electrode is divided into display pixel units, and each of said divided display pixel units has a switching device.

59. A display apparatus comprising an optical device and a illumination means for applying light to said optical device;

said optical device having an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on a lower surface of said plate-shaped light guide, an electrode having periodic electrodes with a periodic structure provided on a lower surface of said optical

control layer for inducing a fine periodic structure for light diffraction in said optical control layer, and a substrate provided on a lower surface of said electrode having periodic electrodes disposed in alternation.

wherein said optical control layer changes in refractive index or absorptivity or scattering degree by an electric field applied by said periodic electrodes disposed in alternation.

60. The display apparatus as claimed in Claim 59, wherein said electrode having periodic electrodes disposed in alternation is provided for each of display pixel units, and each of said display pixel units has a switching device.

61. A display apparatus comprising an optical device and a illumination means for applying light to said optical device;

said optical device having an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, a second electrode provided on a lower

surface of said optical control layer and comprising an electrode divided into a plurality of units, and a plurality of third electrodes corresponding one to one to each of said plurality of divided second electrodes and penetrating through said substrate,

wherein said optical control layer changes in refractive index or absorptivity or scattering degree or diffraction ability by an electric field applied by said first electrode and said second electrode,

each of said plurality of third electrodes has a first end part connecting to said second electrode and a second end part exposed to a surface opposite to said second electrode side of said substrate, and said respective electrodes are capable of being applied with a voltage from said substrate side discretely or dividedly in an optional number of groups.

62. A display apparatus comprising an optical device and a illumination means for applying light to said optical device;

said optical device having an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, a first stacked body integrated with an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent

electrode provided as a first electrode, and a second stacked body integrated with each of substrate divided into a plurality of units,

wherein said second stacked body corresponds one to one to each of said second electrode divided into a plurality of units and a substrate provided on a lower surface of said second electrode and said plurality of divided second electrodes, has a plurality of third electrodes penetrating through said substrate, and arranged on a lower surface of said optical control layer,

said optical control layer changes in refractive index or absorptivity or scattering degree or diffraction ability by an electric field applied by said first electrode and said second electrode,

each of said plurality of third electrodes has a first end part connecting to said second electrode and a second end part exposed to a surface opposite to said second electrode side of said substrate, and said respective electrodes are capable of being applied with a voltage from said substrate side discretely or dividedly in an optional number of groups.

63. The display apparatus as claimed in Claim 32, wherein said illumination means has at least a red light source, a blue light source, and a green light

source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

64. The display apparatus as claimed in Claim 33, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

65. The display apparatus as claimed in Claim 34, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

66. The display apparatus as claimed in Claim 35, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and

green light source in synchronization with display image.

67. The display apparatus as claimed in Claim 36, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

68. The display apparatus as claimed in Claim 37, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

69. The display apparatus as claimed in Claim 44, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

70. The display apparatus as claimed in Claim 59, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

71. The display apparatus as claimed in Claim 60, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

72. The display apparatus as claimed in Claim 61, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

73. The display apparatus as claimed in Claim 62, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

74. An optical device comprising a light transmissive plate-shaped light guide for guiding light incident from an end surface, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, a reflection film provided on a lower surface of said optical control layer, a second electrode provided on a lower surface of said reflection film, and a substrate provided on a lower surface of said second electrode,

wherein said optical control layer changes in scattering degree or diffraction efficiency by an electric field applied by said first electrode and said second electrode,

75. The optical device as claimed in Claim 74, further comprising a light absorption film disposed between said reflection film and said second electrode.

76. An optical device comprising a light transmissive plate-shaped light guide for guiding light incident from an end surface, an optical control layer provided on a lower surface of said light guide through a transparent electrode provided as a first electrode, and a transparent electrode provided as a second electrode provided on a lower surface of said optical control layer,

wherein said optical control layer changes in scattering degree or diffraction efficiency by an electric field applied by said first electrode and said second electrode.

77. The optical device as claimed in Claim 76, further comprising a light absorption film provided on a lower surface of said reflection film.

78. An optical device comprising a light transmissive plate-shaped light guide for guiding light incident from an end surface, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, a reflection film provided on a lower surface of said optical control layer, a second electrode provided on a lower surface of said

reflection film, and a substrate provided on a lower surface of said second electrode,

wherein at least one of said first electrode and said second electrode has

a periodic structure for inducing a fine periodic structure for light diffraction in said optical control layer, and

said optical control layer changes in refractive index or scattering degree or absorbance by an electric field applied by said first electrode and said second electrode.

79. The optical device as claimed in Claim 78, further comprising a light absorption film disposed between said reflection film and said second electrode.

80. The optical device as claimed in Claim 74 or 75, wherein at least one of said first electrode and said second electrode comprises an electrode group divided into strips, when both of said first electrode and said second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

81. The optical device as claimed in Claim 76 or 77, wherein at least one of said first electrode and said second electrode comprises an electrode group divided into strips, when both of said first electrode and said second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

82. The optical device as claimed in Claim 78 or 79, wherein at least one of said first electrode and said second electrode comprises an electrode group divided into strips, when both of said first electrode and said second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

83. The optical device as claimed in Claim 74 or 75, wherein at least one of said first electrode and said second electrode is divided into display pixel units,

and each of said divided display pixel units has a switching device.

84. The optical device as claimed in Claim 76 or 77, wherein at least one of said first electrode and said second electrode is divided into display pixel units, and each of said divided display pixel units has a switching device.

85. The optical device as claimed in Claim 78 or 79, wherein at least one of said first electrode and said second electrode is divided into display pixel units, and each of said divided display pixel units has a switching device.

86. An optical device comprising a light transmissive plate-shaped light guide for guiding light incident from an end surface, an optical control layer provided on a lower surface of said plate-shaped light guide, a reflection film provided on a lower surface of said optical control layer, an electrode comprising periodic electrodes having periodic structures disposed in alternation and provided on a lower surface of said reflection film for inducing a fine periodic structure for light diffraction in said optical control layer, and a substrate provided on a lower

surface of said electrode having periodic electrodes disposed in alternation.

wherein said optical control layer changes in refractive index or scattering degree or absorbance by an electric field applied by said electrode having periodic electrodes disposed in alternation.

87. The optical device as claimed in Claim 86, further comprising a light absorption film disposed between said reflection film and said electrode having periodic electrodes disposed in alternation.

88. The optical device as claimed in Claim 86 or 87, wherein said electrode having periodic electrodes disposed in alternation is provided for each of display pixel units, and each of said divided display pixel units has a switching device.

89. An optical device comprising: a light transmissive plate-shaped light guide for guiding light incident from an end surface; an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode; a reflection film provided on a lower surface of said optical control layer, a second electrode divided into a plurality of electrodes

provided on a lower surface of said reflection film, a substrate provided on a lower surface of said second electrode, and a plurality of third electrodes one to one corresponding to each of said plurality of divided second electrodes and penetrating through said substrate,

wherein said optical control layer changes in refractive index or absorptivity or scattering degree or diffraction ability by an electric field applied by said first electrode and said second electrode,

each of said plurality of third electrodes has a first end part connecting to said second electrode and a second end part exposed to a surface opposite to said second electrode side surface of said substrate, and

said respective electrodes are capable of being applied with a voltage from said substrate side discretely or dividedly in an optional number of groups.

90. The optical device as claimed in Claim 89, further comprising a light absorption film disposed between said reflection film and said second electrode.

91. An optical device comprising: a light transmissive plate-shaped light guide for guiding light incident from an end surface; a first stacked

body integrated with an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, and a second stacked body integrated with each of substrate divided into a plurality of units,

wherein said second stacked body has a reflection film, a second electrode divided into a plurality of units, a substrate provided on a lower surface of said second electrode, and a plurality of third electrodes corresponding one to one to each of said plurality of second electrode, penetrating through said substrate, and arranged on a lower surface of said optical control layer,

said optical control layer changes in refractive index or absorptivity or scattering degree or diffraction ability by an electric field applied by said first electrode and said second electrode,

each of said plurality of third electrodes has a first end part connecting to said second electrode and a second end part exposed to a surface opposite to said second electrode side of said substrate, and said respective electrodes are capable of being applied with a voltage from said substrate side discretely or dividedly in an optional number of groups.

92. The optical device as claimed in Claim 91, further comprising a light absorption film disposed between said reflection film and said second electrode.

93. The optical device as claimed in Claim 74 or 75, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

94. The optical device as claimed in Claim 76 or 77, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

95. The optical device as claimed in Claim 78 or 79, wherein said optical control layer is made of a reverse

mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

96. The optical device as claimed in Claim 86 or 87, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

97. The optical device as claimed in Claim 89 or 90, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is

applied and becomes a scattering state when an electric field is applied.

98. The optical device as claimed in Claim 91 or 92, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

99. The optical device as claimed in Claim 74 or 75, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas.

100. The optical device as claimed in Claim 76 or 77, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid

crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas.

101. The optical device as claimed in Claim 78 or 79, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas.

102. The optical device as claimed in Claim 86 or 87, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas.

103. The optical device as claimed in Claim 89 or 90, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed

in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas.

104. The optical device as claimed in Claim 91 or 92, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas.

105. The optical device as claimed in Claim 74 or 75, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal of liquid crystal area having a structure periodically distributed in the form of a diffraction grating.

106. The optical device as claimed in Claim 76 or 77, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal of liquid crystal area having a structure periodically distributed in the form of a diffraction grating.

107. The optical device as claimed in Claim 78 or 79, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal of liquid crystal area having a structure periodically distributed in the form of a diffraction grating.

108. The optical device as claimed in Claim 86 or 87, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal of liquid crystal area having a structure periodically distributed in the form of a diffraction grating.

109. The optical device as claimed in Claim 89 or 90, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal of liquid crystal area having a structure periodically distributed in the form of a diffraction grating.

110. The optical device as claimed in Claim 91 or 92, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal of liquid crystal area having a structure periodically distributed in the form of a diffraction grating.

111. The optical device as claimed in Claim 74 or 75, wherein said reflection film comprises one selected from:

a dielectric multilayered film; and

a film lower in refractive index than said light guide.

112. The optical device as claimed in Claim 76 or 77, wherein said reflection film comprises one selected from:

a dielectric multilayered film; and

a film lower in refractive index than said light guide.

113. The optical device as claimed in Claim 78 or 79, wherein said reflection film comprises one selected from:

a dielectric multilayered film; and

a film lower in refractive index than said light guide.

114. The optical device as claimed in Claim 86 or 87, wherein said reflection film comprises one selected from:

a dielectric multilayered film; and

a film lower in refractive index than said light guide.

115. The optical device as claimed in Claim 89 or 90, wherein said reflection film comprises one selected from:

a dielectric multilayered film; and

a film lower in refractive index than said light guide.

116. The optical device as claimed in Claim 91 or 92, wherein said reflection film comprises one selected from:

a dielectric multilayered film; and

a film lower in refractive index than said light guide.

117. A display apparatus comprising an optical device and a illumination means for applying light to said optical device,

said optical device having an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on a lower surface of said light guide through a transparent electrode provided as a first electrode,

a reflection film provided on a lower surface of said optical control layer, a second electrode provided on a lower surface of said reflection film, and a substrate provided on a lower surface of said second electrode,

wherein said optical control layer changes in scattering degree or diffraction efficiency by an electric field applied by said first electrode and said second electrode.

118. The display apparatus as claimed in Claim 117, further comprising a light absorption film disposed between said reflection film and said second electrode.

119. A display apparatus comprising an optical device and a illumination means for applying light to said optical device,

said optical device having an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, a reflection film provided on a lower surface of said optical control layer through a

transparent electrode provided as a second electrode, and a substrate provided on a lower surface of said reflection film,

wherein said optical control layer changes in scattering degree or diffraction efficiency by an electric field applied by said first electrode and said second electrode.

120. The display apparatus as claimed in Claim 119, further comprising a light absorption film provided on a lower surface of said reflection film.

121. A display apparatus comprising an optical device and a illumination means for applying light to said optical device,

said optical device having an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on a lower surface of said light guide through a transparent electrode provided as a first electrode, a reflection film provided on a lower surface of said optical control layer, a second electrode provided on a lower surface of said reflection film, and a substrate provided on a lower surface of said second electrode,

wherein at least one of said first electrode and said second electrode has
a periodic structure for inducing a fine periodic structure for light diffraction in said optical control layer, and

said optical control layer changes in refractive index or scattering degree or absorbance by an electric field applied by said first electrode and said second electrode.

122. The display apparatus as claimed in Claim 121, further comprising a light absorption film disposed between said reflection film and said second electrode.

123. The display apparatus as claimed in Claim 117 or 118, wherein at least one of said first electrode and said second electrode comprises an electrode group divided into strips, when both of said first electrode and said second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

124. The display apparatus as claimed in Claim 119 or 120, wherein at least one of said first electrode and said second electrode comprises an electrode group divided into strips, when both of said first electrode and said second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

125. The display apparatus as claimed in Claim 121 or 122, wherein at least one of said first electrode and said second electrode comprises an electrode group divided into strips, when both of said first electrode and said second electrode comprise electrode groups divided into strips, said plurality of strip-formed electrodes constituting said first electrode and said plurality of strip-formed electrodes constituting said second electrodes are disposed to be perpendicular to each other.

126. The display apparatus as claimed in Claim 117 or 118, wherein at least one of said first electrode and said second electrode is divided into display pixel

units, and each of said divided display pixel units has a switching device.

127. The display apparatus as claimed in Claim 119 or 120, wherein at least one of said first electrode and said second electrode is divided into display pixel units, and each of said divided display pixel units has a switching device.

128. The display apparatus as claimed in Claim 121 or 122, wherein at least one of said first electrode and said second electrode is divided into display pixel units, and each of said divided display pixel units has a switching device.

129. A display apparatus comprising an optical device and a illumination means for applying light to said optical device,

said optical device having an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on a lower surface of said plate-shaped light guide, a reflection film provided on a lower surface of said optical control layer, an electrode comprising periodic electrodes disposed in alternation having a

periodic structure provided on a lower surface of said reflection film for inducing a fine periodic structure for light diffraction in said optical control layer, and a substrate provided on a lower surface of said electrodes disposed in alternation,

wherein said optical control layer changes in refractive index or scattering degree or absorbance by an electric field applied by said periodic electrodes disposed in alternation.

130. The display apparatus as claimed in Claim 129, further comprising a light absorption film disposed between said reflection film and said electrode having periodic electrodes disposed in alternation.

131. The display apparatus as claimed in Claim 129 or 130, wherein said electrode having periodic electrodes disposed in alternation is provided for each of display pixel units, and each of said display pixel units has a switching device.

132. A display apparatus comprising: an optical device, a illumination means for applying light to said optical device,

said optical device having an end surface for incident light from said illumination means, a light

transmissive plate-shaped light guide for guiding incident light, an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, a reflection film provided on a lower surface of said optical control layer, a second electrode comprising an electrode divided into a plurality of units provided on a lower surface of said reflection film, a substrate provided on a lower surface of said second electrode, and a plurality of third electrodes corresponding one to one to each of said plurality of second electrode, penetrating through said substrate,

wherein said optical control layer changes in refractive index or absorptivity or scattering degree or diffraction ability by an electric field applied by said first electrode and said second electrode,

each of said plurality of third electrodes has a first end part connecting to said second electrode and a second end part exposed to a surface opposite to said second electrode side of said substrate, and said respective electrodes are capable of being applied with a voltage from said substrate side discretely or dividedly in an optional number of groups.

133. The display apparatus as claimed in Claim 132, further comprising a light absorption film disposed between said reflection film and said second electrode.

134. A display apparatus comprising: an optical device, a illumination means for applying light to said optical device,

said optical device having an end surface for incident light from said illumination means, a light transmissive plate-shaped light guide for guiding incident light, a first stacked body integrated with an optical control layer provided on a lower surface of said plate-shaped light guide through a transparent electrode provided as a first electrode, and a second stacked body integrated with each of substrate divided into a plurality of units,

wherein said second stacked body has a reflection film, a second electrode divided into a plurality of units provided on a lower surface of said reflection film, a substrate provided on a lower surface of said plurality of divided second electrodes, and a plurality of third electrodes corresponding one to one to each of said plurality of divided second electrodes, penetrating through said substrate, and arranged on a lower surface of said optical control layer,

said optical control layer changes in refractive index or absorptivity or scattering degree or diffraction ability by an electric field applied by said first electrode and said second electrode,

each of said plurality of third electrodes has a first end part connecting to said second electrode and a second end part exposed to a surface opposite to said second electrode side of said substrate, and said respective electrodes are capable of being applied with a voltage from said substrate side discretely or dividedly in an optional number of groups.

135. The display apparatus as claimed in Claim 134, further comprising a light absorption film provided between said reflection film and said second electrode.

136. The display apparatus as claimed in Claim 117 or 118, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

137. The display apparatus as claimed in Claim 119 or 120, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

138. The display apparatus as claimed in Claim 121 or 122, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

139. The display apparatus as claimed in Claim 129 or 130, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and

said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

140. The display apparatus as claimed in Claim 132 or 133, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

141. The display apparatus as claimed in Claim 134 or 135, wherein said optical control layer is made of a reverse mode polymer dispersed liquid crystal which is constructed by dispersing a low molecular-weight liquid crystal in a liquid crystalline polymer, and said optical control layer becomes a uniform birefringent thin film when no electric field is applied and becomes a scattering state when an electric field is applied.

142. The display apparatus as claimed in Claim 117 or 118, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas.

143. The display apparatus as claimed in Claim 119 or 120, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas.

144. The display apparatus as claimed in Claim 121 or 122, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas.

145. The display apparatus as claimed in Claim 129 or 130, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas.

146. The display apparatus as claimed in Claim 132 or 133, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid crystal in which respective polymer resin area and liquid crystal area form continuous areas.

147. The display apparatus as claimed in Claim 134 or 135, wherein said optical control layer comprises one of constructions of liquid crystal particles dispersed in a polymer resin area, a polymer dispersed liquid crystal comprising polymer resin particles dispersed in a liquid crystal, and a polymer dispersed liquid

crystal in which respective polymer resin area and liquid crystal area form continuous areas.

148. The display apparatus as claimed in Claim 117 or 118, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal of liquid crystal area having a structure periodically distributed in the form of a diffraction grating.

149. The display apparatus as claimed in Claim 119 or 120, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal of liquid crystal area having a structure periodically distributed in the form of a diffraction grating.

150. The display apparatus as claimed in Claim 121 or 122, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal of liquid crystal area having a structure periodically distributed in the form of a diffraction grating.

151. The display apparatus as claimed in Claim 129 or 130, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal of liquid crystal area having a structure periodically distributed in the form of a diffraction grating.

152. The display apparatus as claimed in Claim 132 or 133, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal of liquid crystal area having a structure periodically distributed in the form of a diffraction grating.

153. The display apparatus as claimed in Claim 134 or 135, wherein said optical control layer comprises a holographic polymer dispersed liquid crystal of liquid crystal area having a structure periodically distributed in the form of a diffraction grating.

154. The display apparatus as claimed in Claim 117 or 118, wherein said reflection film comprises a film lower in refractive index than a dielectric multilayered film or said light guide.

155. The display apparatus as claimed in Claim 119 or 120, wherein said reflection film comprises a film lower in refractive index than a dielectric multilayered film or said light guide.

156. The display apparatus as claimed in Claim 121 or 122, wherein said reflection film comprises a film

lower in refractive index than a dielectric multilayered film or said light guide.

157. The display apparatus as claimed in Claim 129 or 130, wherein said reflection film comprises a film lower in refractive index than a dielectric multilayered film or said light guide.

158. The display apparatus as claimed in Claim 132 or 133, wherein said reflection film comprises a film lower in refractive index than a dielectric multilayered film or said light guide.

159. The display apparatus as claimed in Claim 134 or 135, wherein said reflection film comprises a film lower in refractive index than a dielectric multilayered film or said light guide.

160. The display apparatus as claimed in Claim 117 or 118, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

161. The display apparatus as claimed in Claim 119 or 120, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

162. The display apparatus as claimed in Claim 121 or 122, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

163. The display apparatus as claimed in Claim 129 or 130, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

164. The display apparatus as claimed in Claim 132 or 133, wherein said illumination means has at least a

red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.

165. The display apparatus as claimed in Claim 134 or 135, wherein said illumination means has at least a red light source, a blue light source, and a green light source, and further comprising means for successively switching said red light source, blue light source and green light source in synchronization with display image.